

## ADDITIONAL NOTEWORTHY RECORDS OF BIRDS FROM ARCHAEOLOGICAL SITES

PAUL W. PARMALEE

INDIANS of eastern United States utilized many of the native animals for basic subsistence: the flesh was eaten, hides served as clothing and robes, and bones were altered to make tools and ornaments. Occasionally certain body parts (skulls, claws, teeth, feathers) figured significantly in ceremonial rites and regalia and they were included with the dead as grave offerings. Remains of these animals often provide an index to their early distribution and possible abundance. Differences between past and present numbers, range and/or status of certain species are of special zoological interest.

In addition to the ornithological interest in these elements, the fact that the birds were taken and used by the Indian often compounds the significance of such records: discussion of this material should be treated as an intricate part of both fields of archaeology and zoology. Since the publication of an article dealing with archaeological remains of rare or extinct birds and those now extirpated from Illinois (Parmalee, 1958), additional faunal samples from eleven Indian midden deposits and cemeteries have supplemented the presently known early range of such species. Basic data pertaining to the archaeological sites from which these avian remains were recovered are listed in Table 1. All of the elements discussed here are in the archaeozoological collections of the Illinois State Museum.

Swallow-tailed Kite (*Elanoides forficatus*).—Ridgway (1889) wrote that "In former years common throughout the State, and in some portions even at times abundant, . . . is becoming scarcer every year." Smith and Parmalee (1955) report the species as accidental in Illinois and list only four sight records since 1900. The first archaeozoological evidence of this kite in Illinois was reported by Parmalee (1958): a complete femur and tibiotarsus were recovered from a refuse pit at the Cahokia Site.

Although never numerous in proportion to remains of Turkey and waterfowl, bones of the Bald Eagle, hawks (*Buteo*, *Falco*, *Accipiter*), and owls (*Strix*, *Bubo*) are encountered not uncommonly in midden deposits. An incomplete right tarsometatarsus (proximal end missing) found at the Jasper Newman Site represents the second and most recent prehistoric record of the Swallow-tailed Kite in Illinois.

Whooping Crane (*Grus americana*).—Baker (1941) recorded this species as having been identified from remains recovered from Late Woodland–Early Mississippian sites in Peoria and Jackson counties, Illinois. Only one other bone of *G. americana* has since been found at an Indian site in Illinois. This element, a 7-inch section of a right humerus taken from a refuse pit at

TABLE 1  
ARCHAEOLOGICAL SITES FROM WHICH THE BIRD BONES WERE RECOVERED

Site name and location	Cultural affiliation and time of occupancy	Investigator and year excavated or (published reference)
Cahokia: 3 mi. W. of Collinsville, Madison/St. Clair counties, Illinois.	Middle Mississippi 900-1500 A.D. (Village and Mounds)	Parmalee (1958)
Crawford Farm: 1½ mi. E. of Milan, Rock Island County, Illinois.	Historic Sauk-Fox 1790-1810 A.D. (Village and Cemetery)	Parmalee (1964)
Emmons: 1 mi S. of Marbletown, Fulton County, Illinois.	Middle Mississippi 900-1500 A.D. (Cemetery)	Merrill Emmons 1958
Etowah: 3 mi. S.W. of Cartersville, Bartow County, Georgia.	Etowah Period I to IV (1100-1500 A.D.) to Early Cherokee (1600-1700 A.D.) (Village and Mounds)	Kelly and Larson (1957) van der Schalie and Parmalee (1960)
Fairchance: Moundsville, Marshall County, West Virginia.	Early Woodland-Hopewell 0-200 A.D. (Village and Mound)	West Va. Archaeo. Society 1964
Flynn Cemetery: Northern Allamakee County, Iowa.	Historic 1650-1700 A.D. (Cemetery)	Bray (1961)
Irving: 1 mi. N. of Chambersburg, Pike County, Illinois.	Late Woodland 525-1025 A.D. (Village)	McGregor (1958)
Jasper Newman: 10 mi. S.W. of Sullivan, Moultrie County, Illinois.	Middle Mississippi 900-1500 A.D. (Village)	Wm. M. Gardner 1964
Modoc Rock Shelter: 2 mi. S.E. of Prairie du Rocher, Randolph County, Illinois.	Archaic 8000 B.C.-1500 A.D. (Camp)	Parmalee (1959b)
Pool: 1½ mi. N. of Chambersburg, Pike County, Illinois.	Late Hopewell 100-300 A.D. (Village)	McGregor (1958)
Schild: 4 mi. S. of Eldred, Green County, Illinois.	Late Woodland- Early Mississippi 800-1200 A.D. (Cemetery)	Gregory Perino 1962
Snyders: 4 mi. N. of Batchtown, Calhoun County, Illinois.	Hopewell 100 B.C.-200 A.D. (Village)	Stuart Struever 1960

the Pool Site, had several deep, transverse butchering (?) cuts at the center of the shaft; both ends had been broken off.

Ridgway (1895) states "Once an abundant migrant, and in some localities a common summer resident, . . . Mr. Nelson remarks of it: 'Along the Illinois River and more thinly settled portions of the State it is still common during the migrations, and a few pairs breed upon the large marshes in central Illinois.'" However, the paucity of remains of the whooping crane from archaeological sites suggests that the Indian seldom took—or encountered—this bird. On the other hand, numerous bones of the Sandhill Crane (*Grus canadensis*) found at Cahokia (Parmalee, 1957) and at other sites indicate that this species was far more common in prehistoric times than the Whooping Crane.

In September, 1958, an Indian burial site was discovered during road construction along Bear Creek in northern Allamakee County, Iowa. This site, referred to as the Flynn Cemetery, contained approximately 17 burials. Two bird skulls, placed with separate burials as intentional offerings, were of special interest. The bill and anterior part of the skull of a Raven (*Corvus corax*) was found just above the right shoulder of Burial No. 1. In addition to two swan (?) wing bone whistles recovered with Burial No. 4, Bray (1961) reported that "Lying on top of the left femur at its proximal end was the beak and part of the skull of a bird tentatively identified as a heron." This specimen was, in fact, a Whooping Crane; a complete quadrate, upper bill, a portion of the cranium, and sections of the lower bill had been salvaged. The bird was probably taken locally as *G. americana* was known to have nested in Iowa (A.O.U., 1957) and since the skull (head) had been included as a grave offering, this crane was apparently of special significance.

Large quantities of bone and shell were recovered during summer (1954, 1955, 1956) excavations of Mounds B and C at the Etowah Site, Georgia. The species of vertebrates and number of remains were similar for both of these mounds and their adjoining village areas: animal remains from Mound C have been reported by van der Schalie and Parmalee (1960). With regard to bird remains, bones of the Turkey were the most numerous, followed by those of the Passenger Pigeon. One interesting find from Mound B that was not encountered in Mound C included three bones of the Whooping Crane: a complete right 1st phalanx; a 7¼-inch shaft section of a left ulna and the proximal end section of a left tarsometatarsus. According to the 5th A.O.U. Check-list (1957), *G. americana* formerly wintered along the southeast coast of Georgia (St. Simons Island). Bones of the Whooping Crane from the Etowah Site were from a bird—or birds—taken probably during migration through the northwestern section of Georgia (Bartow County) or possibly from wintering birds killed by Indians on forays to the coast.

Long-billed Curlew (*Numenius americanus*).—Presently this bird is considered of accidental occurrence in Illinois although Ridgway (1895) referred to early accounts which listed it as “more or less” common or even abundant locally during migration and as a summer resident. Remains of shorebirds are rarely encountered in archaeological sites and apparently the Indian made little use of these birds. The most recent archaeozoological record of this curlew from Illinois consisted of a complete left carpometacarpus and section of a left ulna from the Crawford Farm Site (Parmalee, 1964). Since publication of that article, a complete left radius of *N. americanus* was identified from a small sample of bone saved by Mr. Dale F. Holmgrain, East Moline, during final salvage operations at this site in 1963.

Carolina Parakeet (*Conuropsis carolinensis*).—With reference to the parakeet's status in Illinois, Ridgway (1889) wrote that it “. . . is probably now everywhere extinct within our borders, though fifty years ago it was of more or less common occurrence throughout the State.” Remains of this extinct bird in Indian midden and refuse deposits are rare and prior to the following, bones of *C. carolinensis* have been reported from only the Cahokia Site in Illinois (Parmalee, 1958).

A complete left coracoid of this parakeet was found at the Irving Site. Considering the former abundance and distribution of the Carolina Parakeet in Illinois and the few remains thus far encountered at archaeological sites, the Indian rarely made use of this beautiful bird. However, in addition to the two ulnae and a tarsometatarsus recovered at the Cahokia Site (Parmalee, op. cit.), nine upper bills were found together in a refuse pit at this site which suggests that, at least in one instance, the Indian had used the parakeet as some form of decoration.

Snowy Owl (*Nyctea scandiaca*).—Smith and Parmalee (1955) list the Snowy Owl as an irregular and rare winter visitant in northern Illinois and a very rare winter visitant in the central and southern parts of the state. Bones of this attractive owl might be expected in midden deposits since feathers and occasionally body parts of raptorial and certain other species or groups of birds were used for ornaments and decoration. However, the normal rarity of the Snowy Owl in Illinois would limit the number of birds available to the Indian. The following records, the first evidence of the prehistoric Indian in Illinois using this owl, are noteworthy because of the rarity of *N. scandiaca* in central Illinois and the purpose for which the birds were used.

The late Mr. Merrill Emmons, Astoria, Illinois, had an extensive Middle Mississippian cemetery on his property. The burials had been placed at the top and along the slope of a section of bluff bordering the Illinois River on the west. On 16 August 1958, Mr. Emmons uncovered a child burial (est.

age, 5 years); beside each upper arm (humerus) of this child was a complete right carpometacarpus of the Snowy Owl. Of special interest was the fact that both of these elements were from a right wing, thus representing two owls. These owl wings had been used probably as fans or for some type of decoration and were placed beside the arms of the child when the body was interred. The practice of placing bird wing artifacts with burials by peoples of the Mississippian culture has been reported from sites in Arkansas (Parmalee, 1959a) and from sites in other eastern states.

The second archaeozoological record of this owl in Illinois consisted of wing and leg elements recovered with two burials at the Schild Site. Mr. Gregory Perino, Thomas Gilcrease Foundation, Tulsa, Oklahoma, removed approximately 300 Late Woodland–Early Mississippian burials from this cemetery. Found with Burial No. 70 were the paired carpometacarpals (process of metacarpal I and extensor attachment of the right had been cut away) and left wing digits of *N. scandiaca*. Burial No. 265 was a bundle reburial and with it was found the left carpometacarpus of a Great Horned Owl (*Bubo virginianus*) and the left tarsometatarsus of a Snowy Owl. In addition to the leg element, 10 phalanx elements (including 6 claws) were also recovered which suggest that probably both legs of the owl had been placed with the burial at the time of original interment. A similar grave offering from a Hopewell burial mound in Michigan was illustrated and described by Flanders and Cleland (1964).

The most recent discovery of Snowy Owl remains found in association with archaeological materials occurred on 16 October 1966. While removing 11 Indian burials on the farm of Victor Krueger, located on the Mississippi River bluff three miles southwest of Columbia, Monroe County, Illinois, Mr. Perino recovered the right tarsometatarsus, and a first and ungual phalanges that were lying near the skull of an adult male. This lower leg of the Snowy Owl, plus the carpometacarpus of a Turkey and the lower jaw of a mink found together with another burial, were the only grave offerings encountered. Teeth in two of the human skulls had been filed or edge-notched (Perino, pers. com., letter of 16 October 1966); this condition (of Mexican origin) plus the trait of including bird wing or leg parts when interring the body, suggests that these burials were of the Mississippian cultural period.

Ivory-billed Woodpecker (*Campephilus principalis*).—Remains of this woodpecker have been found in few archaeological sites located in states (Ohio: Wetmore, 1943; Illinois: Parmalee, 1958, 1964) north of its known former range in eastern North America. The bones of *C. principalis* from Scioto County, Ohio (Wetmore, op. cit.) and Madison County, Illinois (Parmalee, 1958) were both tarsometatarsals and were recovered in midden deposits rather than with burials; therefore, they probably represent the

remains of birds that died or were killed locally and not an imported or bartered trade item. However, the one upper and two lower bill sections (2 individuals) recovered from the historic Sauk-Fox cemetery in Rock Island County, Illinois (Parmalee, 1964) may have been part of a headdress or pipe decoration and represent decorative items obtained from another (southern?) source or locality. The use of bills and "scalps" of this woodpecker by certain historic Indian groups for pipe stem decoration is well documented.

During the summer of 1964, members of the Wheeling area chapter of the West Virginia Archeological Society excavated the Fairchance Mound and some of the associated fill and village midden. John E. Guilday, Carnegie Museum, Pittsburgh, submitted a small series of bird bones from this site to the author for identification and among these elements were two lower bill sections (same bird?) of the Ivory-billed Woodpecker that had been recovered in the midden debris. It is impossible to ascertain whether these bones were from a bird taken locally or represent a trade artifact; the early range of this species probably included sections of West Virginia although there are apparently no existing specimens or other authenticated records from this region.

Common Raven (*Corvus corax*).—Whether or not the Indian utilized ravens and crows for food is a matter of speculation, but the fact that he was well aware of these birds is evidenced by occasional bones recovered in midden debris, bones (originally, body parts) placed with burials (Bray, 1961; Wittry, 1962) and depictions in the form of effigy pipes (Fowler, 1957). Miller (1961) has stated that "My surmise is that at least certain clans or brotherhoods of the tribe used the corvids in sacrifice or captured them for their plumage. . . ." The raven is presently of accidental occurrence in Illinois although it probably was never a common bird in the prairie regions.

Parmalee (1958) summarized archaeozoological records of this bird in Illinois to that date; since then, paired wing elements (carpometacarpal) recovered in 1960 at the Crawford Farm Site were reported (Parmalee, 1964). In addition to these two wing bones from this Sauk-Fox village, a complete right 1st phalanx of *C. corvax* was later determined from a small sample of bone that had been inadvertently mixed with artifact material. In May, 1958, the late Merrill Emmons found an eagle claw and two upper bill sections (two individuals), a complete right carpometacarpus and right tarsometatarsus of the raven with a Middle Mississippian burial on his property. These elements were placed with the body (an adult male) when it was interred as contents of a medicine bag or possibly as trophies or ornaments sewn to the clothing.

Fish Crow (*Corvus ossifragus*).—With reference to the Midwest, the 5th A.O.U. Check-list (1957) records the inland distribution of the Fish Crow as “. . . along major river systems to southwestern Tennessee (Memphis), . . .” Although this bird has not been reported from Illinois, recent records along the Mississippi River in southeastern Missouri (Easterla, 1965) indicate the Fish Crow to be at least a summer resident in that region. Easterla (op. cit.) mentions that several members of the St. Louis Audubon Society have reported summer sight records of this species along the river south of St. Louis; it is reasonable to assume the bird probably occurs on both sides of the river. The following two specimens are of special interest since they represent the first archaeozoological records and constitute evidence for the prehistoric occurrence of the Fish Crow in Illinois, a bird previously unrecorded from the state.

The first element, a nearly complete right carpometacarpus, was found at the Modoc Rock Shelter Site. Bone and shell were extremely abundant in this deposit (nearly 8,000 identifiable vertebrate remains: Parmalee, 1959*b*); a minimum of 56 species of birds were identified. The second Illinois specimen is a complete right tarsometatarsus found by Stuart Struever at the Snyders Site. Both elements occurred in midden deposits and although there is no evidence to suggest special use of the Fish Crow by the Indians, these bones provide the basis for assuming that this bird did occur in prehistoric times along the Mississippi River bordering central and southern Illinois.

#### SUMMARY

Remains of seven species of birds found in archaeological sites in Iowa, Illinois, West Virginia, and Georgia which are now either extinct, rare, or extirpated in these states are discussed. Supplements to the known range of these species and their use by the Indian are presented; two bones of the Fish Crow from Indian sites in southwestern Illinois constitute the first record of this bird for that state.

#### ACKNOWLEDGMENTS

I would like to express my gratitude to Mrs. Rosalie Emmons, Stuart Struever, John C. McGregor, Robert T. Bray, John E. Guilday, Gregory Perino, Dale F. Holmgren, William M. Gardner, and Lewis H. Larson, Jr. for donating the specimens described and for permission to use the data. Special appreciation is extended to Alexander Wetmore, Research Associate, United States National Museum, Washington, for verification of preliminary identifications made on several of the bird bones described here.

#### LITERATURE CITED

##### AMERICAN ORNITHOLOGISTS' UNION

1957 The A.O.U. check-list of North American birds: 5th edition.

##### BAKER, F. C.

1941 A study in ethnozoology of the prehistoric Indians of Illinois. Pt. 2. *Trans. Amer. Philosoph. Soc.*, 32:51-77.

- BRAY, R. T.  
1961 The Flynn cemetery: an orn focus Oneota burial site in Allamakee County. *J. Iowa Archaeological Soc.*, 10:15-25.
- EASTERLA, D. A.  
1965 Range extension of the Fish Crow in Missouri. *Wilson Bull.*, 77:297-298.
- FLANDERS, R. E., AND C. E. CLELAND  
1964 The use of animal remains in Hopewell burial mounds, Kent County, Michigan. *Jack-pine Warbler*, 42:302-309.
- FOWLER, M. L.  
1957 Rutherford Mound, Hardin County, Illinois. *Illinois State Mus. Sci. Papers*, 7.
- KELLY, A. R., AND L. H. LARSON  
1957 Explorations at Etowah, Georgia 1954-1956. *Archaeology*, 10:39-48.
- MCGREGOR, J. C.  
1958 The Pool and Irving villages. Univ. of Illinois Press, Urbana.
- MILLER, L.  
1961 Bird remains from Indian middens in the Dakota area. *Bull. So. California Acad. Sci.*, 60 (Pt. 3):122-126.
- PARMALEE, P. W.  
1957 Vertebrate remains from the Cahokia site, Illinois. *Trans. Illinois State Acad. Sci.*, 50:235-242.  
1958 Remains of rare and extinct birds from Illinois Indian sites. *Auk*, 75:169-176.  
1959a Animal remains from the Banks site, Crittenden County, Arkansas. *Tennessee Archaeological Soc. Misc. Paper* No. 5.  
1959b Animal remains from the Modoc Rock Shelter Site, Randolph County, Illinois. Appendix II, pp. 61-65 in Summary Report of Modoc Rock Shelter 1952, 1953, 1955, 1956 by M. L. Fowler. Illinois State Museum Report Invest. No. 8.  
1964 Vertebrate remains from an historic archaeological site in Rock Island County, Illinois. *Trans. Illinois State Acad. Sci.*, 57:167-174.
- RIDGWAY, R.  
1889 The ornithology of Illinois. State Lab. Nat. Hist., Pt. I, Vol. I. Springfield.  
1895 The ornithology of Illinois. State Lab. Nat. Hist., Pt. I, Vol. II. Springfield.
- SMITH, H. R., AND P. W. PARMALEE  
1955 A distributional check list of the birds of Illinois. Illinois State Mus., Pop. Sci. Ser. IV.
- VAN DER SCHALIE, H., AND P. W. PARMALEE  
1960 Animal remains from the Etowah site, Mound C, Bartow County, Georgia. *Florida Anthropol.*, 13:37-54.
- WETMORE, A.  
1943 Evidence of the former occurrence of the Ivory-billed Woodpecker in Ohio. *Wilson Bull.*, 55:55.
- WITTRY, W. L.  
1962 A raven headdress from Sauk County, Wisconsin. *Wisconsin Archaeology* 43:87-94.